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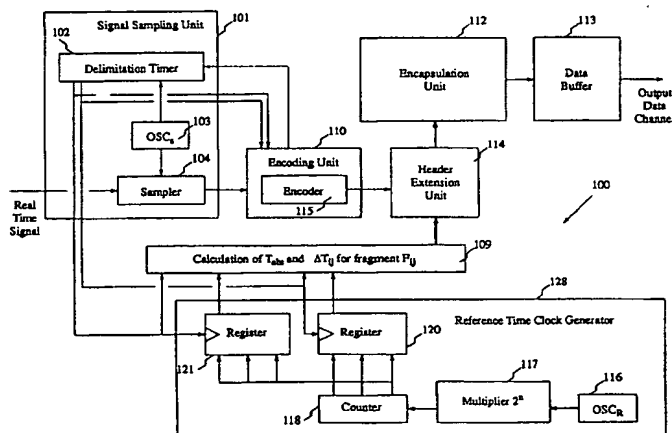
(57) Abstract

The present invention allows routers in a digital communications network, such as the Internet, to be given the time awareness that is necessary for timely transfer of real time signals in the form of digital data packets. Timing information generated at the source of the signal is included in the packets in the form of first and second time stamps, which are used by network routers to establish dispatch deadlines by which the packets must be forwarded to ensure time–faithful reconstruction of the real time signal at the destination. The same timing information can be used at the destination to synchronise the clock for presentation of the real time signal to the source clock. The first and second time stamps (a differential time and a dispatch time) are derived by a transmitter unit (100) from a counter (118) that counts pulses from an oscillator (116) that most advantageously is locked to an integer multiple or a fraction of a universally available time measure. Assuming that the same time measure, or at least a very near replica, is available at routers in the network and at destinations connected to the network, the time stamps marked in the packets can be used by routers to effect scheduling for timely dispatch of the packets.